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DATA SHEET

WTB140-P132

Photoelectric sensors

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Sensor Intelligence



Illustration may differ

PHOTOELECTRIC SENSORS

WTB140-P132

ORDERING INFORMATION

Type	part no.
WTB140-P132	6012640

Further device versions and accessories at www.sick.com/

DETAILED TECHNICAL DATA

FEATURES

Functional principle	Photoelectric proximity sensor
Functional principle detail	Background suppression
Dimensions (W x H x D)	11 mm x 31 mm x 20 mm
Housing design (light emission)	Rectangular
Sensing range max.	2 mm ... 500 mm ¹⁾
Sensing range	15 mm ... 500 mm ¹⁾
Type of light	Visible red light
Light source	LED
Wave length	680 nm

¹⁾ Object with 90% remission (based on standard white, DIN 5033).

MECHANICS/ELECTRONICS

Supply voltage	10 V DC ... 30 V DC
Ripple	± 10 %
Current consumption	30 mA ¹⁾
Switching output	PNP
Switching mode	Light/dark switching
Switching mode selector	Selectable via light/dark rotary switch
Response time	≤ 0.5 ms ²⁾
Connection type	Cable, 2 m ³⁾
Cable material	PVC

¹⁾ Without load.

²⁾ Signal transit time with resistive load.

³⁾ Do not bend below 0 °C.

Conductor cross section	0.18 mm ²
Cable diameter	Ø 4 mm
Housing material	Plastic, PBT
Optics material	Plastic, PC
Enclosure rating	IP67
Ambient operating temperature	-25 °C ... +55 °C
Ambient temperature, storage	-40 °C ... +70 °C
UL File No.	NRNT2.E128350 & NRNT8.E128350

¹⁾ Without load.

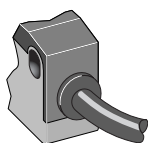
²⁾ Signal transit time with resistive load.

³⁾ Do not bend below 0 °C.

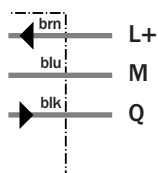
SAFETY-RELATED PARAMETERS

MTTF _D	711 years
DC _{avg}	0 %

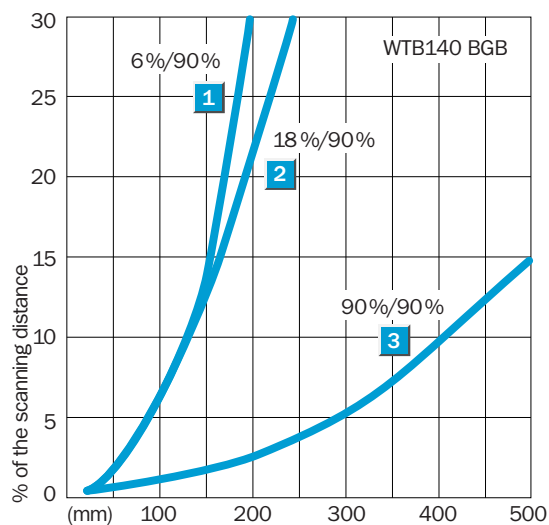
CONNECTION TYPE



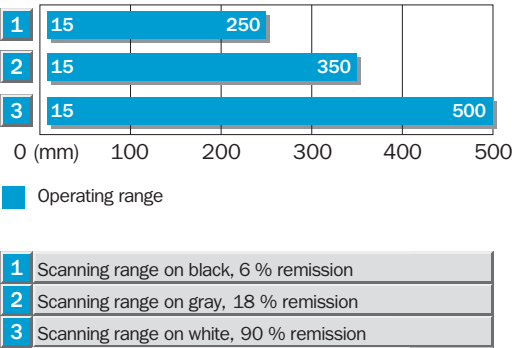
CONNECTION DIAGRAM



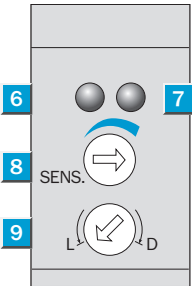
CHARACTERISTIC CURVE



SENSING RANGE DIAGRAM

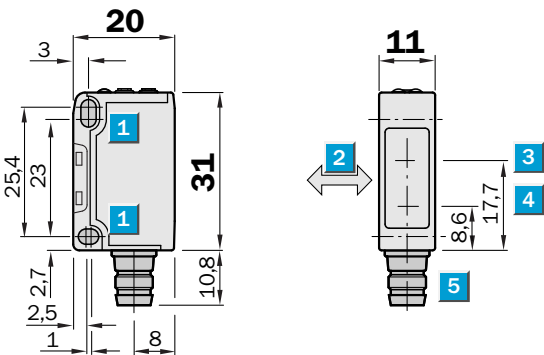


ADJUSTMENTS



- ⑥ Green LED indicator: light reception with operating reserve >1.1 and < 0.9
- ⑦ Orange LED indicator : switching output active
- ⑧ Sensing range adjustment: potentiometer, 5 turns
- ⑨ Light/ dark rotary switch: L = light switching, D = dark switching

DIMENSIONAL DRAWING



- Dimensions in mm (inch)
- ① Mounting hole, $\varnothing 3.2$ mm for M3
 - ② Standard direction of the material being detected
 - ③ Center of optical axis, receiver
 - ④ Center of optical axis, sender
 - ⑤ Connection

Further information as well as suitable accessories, example applications and downloads such as CAD dimensional models, operating instructions and software can be found at www.sick.com/6012640



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SICK AT A GLANCE

SICK is a leading global technology company for intelligent sensors and integrated solutions in industrial automation. Our technologies set benchmarks, making your industrial processes more efficient, safer and more sustainable – both in logistics and manufacturing operations.

SICK combines sensor intelligence with industry expertise and certified consulting services. We provide the ideal foundation for scalable as well as tailor-made automation solutions and create added value along the entire value chain. Our close partnerships with our customers are more than just a promise: Together, we optimize productivity, improve quality, protect health and safety, and help build a sustainable future. All with empathy and trust.

Since 1946, we have been developing innovative technologies with passion and a pioneering spirit. With a global network in around 40 countries, SICK has a global presence and is always close by. The company's headquarters are located in Waldkirch near Freiburg, Germany. Our customers benefit from our understanding of both local and global requirements, which enables us to deliver tailor-made solutions

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